UPDATE REPORT 1990
HOUSEHOLD AND HOUSING PROJECTIONS
1986-2001

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EXECUTIVE SUMMARY

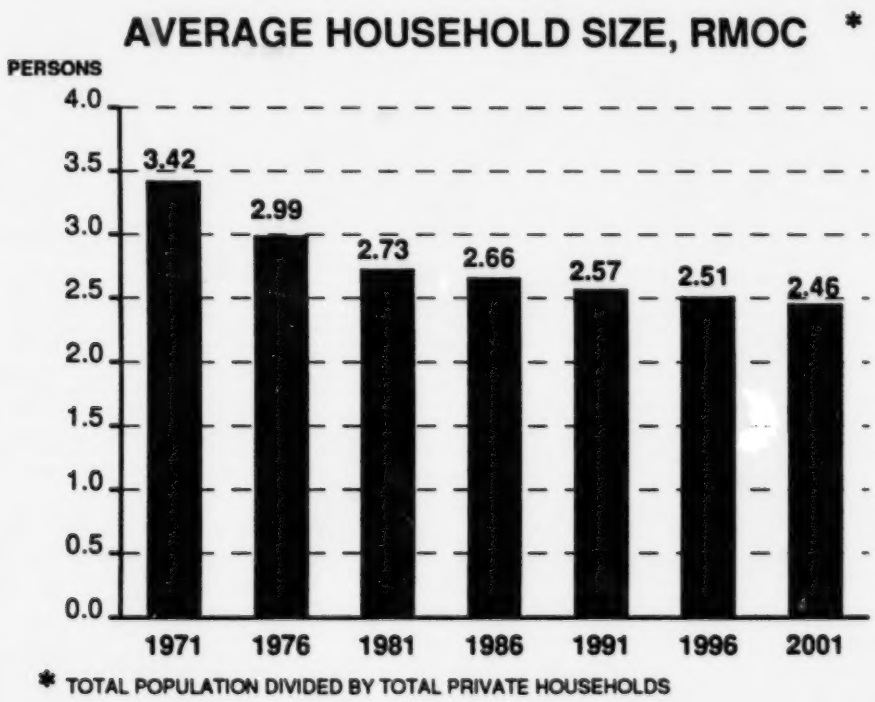
The Research Division of The Regional Group was commissioned by the Planning Department of the Regional Municipality of Ottawa-Carleton to assist in the 1990 Update of Household and Housing Projections. On the basis of the revised population projection produced by the Planning Department and a review of recent literature on household formation and housing and tenure choice, the assignment was to update projections of households and housing requirements by housing type, household type, and tenure to 2001.

The Planning Department revised population projection (1990) uses a 1986 base, and assumes 7000 net migrants annually, along with assumed levels of fertility and mortality. The resulting number of adults (aged 15+) projected for 2001 is 640,000, an increase of 40,000 over the previous projection.

The consultant's literature review suggests that headship rates will decline for all age cohorts over the projection period. Contributing factors include delayed home leaving for young adults, increased immigration (with greater incidence of extended families) among middle aged cohorts, and increased male survival for those over 55.

Because of the projected decline in headship rates, household growth to 2001 will result solely from population growth and changes in the region's age structure leading to continuing gradual decline in household size (Figure A). A total of 86,000 additional households are expected; this is 7,100 fewer than if the headship rates projected in 1986 were applied to the revised population projection.

FIGURE A



Average annual household growth is projected to peak in the 1986-91 period at about 6,200 (Figure B). Household growth will decline on average through the 1990s due to aging of the population out of the prime household formation years.

Fully two-thirds of household growth will be in the 35-54 year old cohorts, due to middle aging of the post-war baby boom As shown in Figure C, this group exhibits high demand for single-detached housing. Consequently, over half of the household growth will be in single detached units (45,900), largely due

FIGURE B

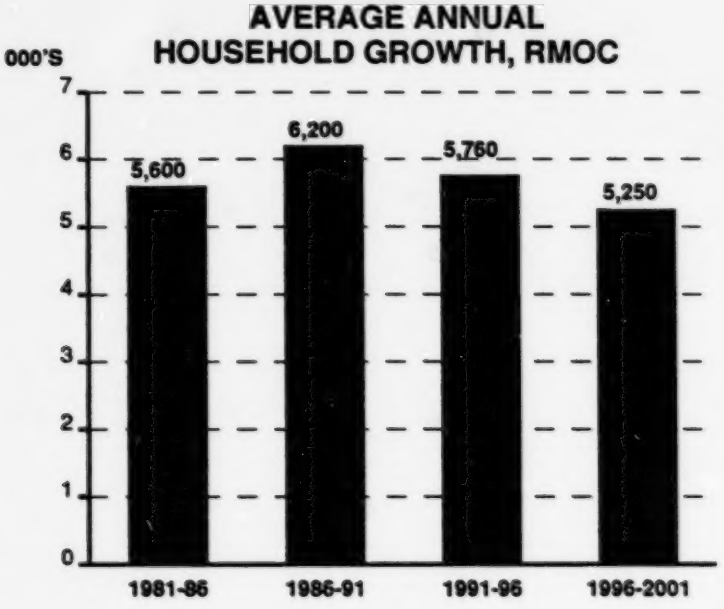
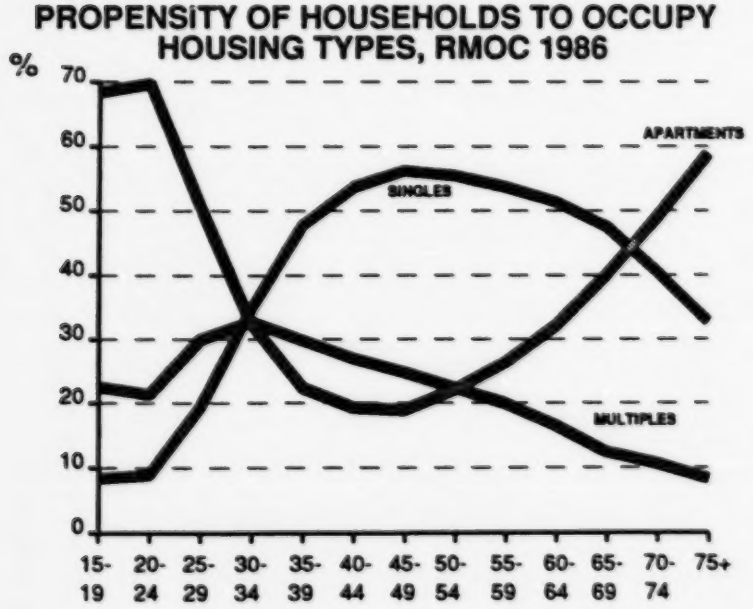


FIGURE C



to the increase in the number of middle aged households seeking single-detached homes for raising families. A total of 20,800 additional apartment units will be required, largely for young middle aged singles, but also for an increasing number of seniors. For non-apartment multiples the projected increase is 19,500 units, for which the primary demand is expected from young adults looking for starter homes and "empty-nesters" seeking luxury townhouse accommodation.

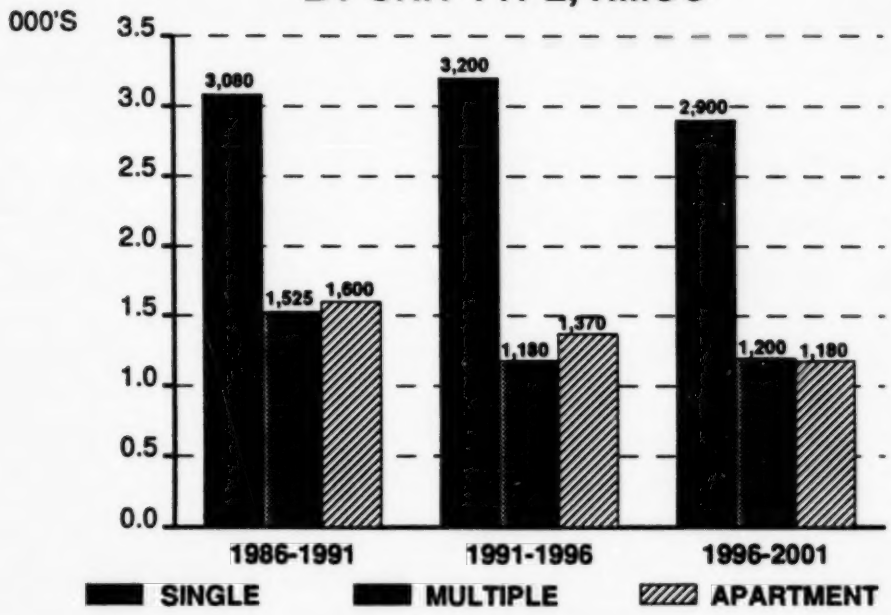
Demand for single-detached units will peak in the early 1990s (Figure D). The market for multiples will fall in the short-term, but will stabilize over the next decade. Apartment demand is projected to decline to the end of the century.

The proportion of family households is expected to decrease slightly for 15-24 year olds. Those who do leave the parental nest will increasingly form mixed-single, rather than married person households. Incidence of family households is expected to increase for all other cohorts. Among the middle aged, for whom rates of marital breakup are reported to be stabilizing, any increase in the proportion of family households should be largely due to an influx of traditional families from abroad toward the end of the projection period. For empty-nesters and seniors, increased male survival is expected to increase the percentage of family households, particularly for the 75+ group. The overall split between family and non-family households, which was 69:31 in 1986, is expected to be 72:28 in 2001.

Minimal shifts in tenure, which was split 52:48 between ownership and rental in 1986, are expected. Ownership has traditionally been the preferred form of tenure, increasing in popularity to age 65. However, propensity to rent is expected to increase slightly in the 90s. As the baby boom ages, the starter housing market is expected to decline, resulting in reduced ownership

FIGURE D

AVERAGE ANNUAL HOUSEHOLD GROWTH BY UNIT TYPE, RMOC



for young adults. Incidence of ownership is expected to decline marginally among the middle aged, as numbers of immigrants increase toward the end of the projection period. Attractive alternatives to ownership are increasing for the post retirement cohorts, and recent data suggest that preference for ownership is now beginning to decrease after age 60.

However, the considerable swelling of the ranks of middle aged households, for whom ownership is still strongly preferred, means that overall incidence of ownership will increase slightly, despite predicted decreases in propensity for all cohorts. The expected ownership - rental split in 2001 is 53:47.

A total of 48,600 additional ownership units and 37,500 rental units will be required over the projection period.

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RMOC HOUSEHOLD PROJECTIONS

INTRODUCTION

The Research Division of The Regional Group was commissioned by the Planning Department of the Regional Municipality of Ottawa- Carleton to assist in the Update of Household and Housing Projections. The components of this work were as follows:

1) Literature review:

Task: to review recently published books, monographs, and articles on trends in household formation and housing and tenure choice to identify trends in headship and occupancy rates.

Product: a compilation of relevant published articles and excerpts from reference works, along with summary notes.

2) Household projection:

Task: to update the April 1986 household projection in light of the review of demographic and social trends undertaken in 1) and the population projection produced by the RMOC.

Product: a revised household projection, accompanied by a written profile of each age cohort which summarizes factors expected to affect future headship rates. The household projection is disaggregated into age cohorts and considers household type (family, non-family, single person).

3) Housing requirements:

Task: to update the 1986 housing projection in light of the literature review undertaken in 1) and the household projection produced in 2).

Products: an age specific projection of housing requirements by housing type, and an age specific projection of housing requirements by tenure, along with summary text on expected housing type and tenure preferences of each age cohort.

METHOD

A variety of published work was reviewed, including articles or studies of demographic trends, household formation, and housing demand. Virtually all of the material reviewed was published post 1983, although certain articles analyzed data from as early as 1950. Because of the lag in availability of 1986 census data, the 1981 Census of Canada was the primary data source; however, some 1986 Census findings were reported and analyzed in the most recent literature.

The point of departure for this update is the 1990 RMOC Planning Department's revised population projection (to 2001). Using a 1986 base, assumptions include 7,000 net migrants annually (an increasing percentage of whom will be from abroad), constant 1986 fertility and decreasing mortality (based on provincial projections).

This revised population projection is the basis for the household projection, which in turn gives rise to the projection of housing units. Since each successive projection embodies the assumptions and uncertainties of the former, the household and housing unit projections should be considered as illustrative. However, the level of uncertainty attached to such projections does not detract from their usefulness for planning purposes.

REVIEW OF THE 1986 HOUSEHOLD PROJECTION REPORT

The first step in this paper is to review how the RMOC population projection is translated into a projection of households.

The number of households that will be formed is a function of three parameters: the number of adults in the population (here defined as ages 15 and over); their desires towards forming (or maintaining) households of various characteristics; and their financial capability to achieve these desires.

The first parameter, the number of adults, has been projected as shown in Figure 1 (projection supplied by RMOC Planning Department). The planning staff projection results in a 2001 total population of 775,000. This is a 50,000 upward adjustment to the previous projection of 725,000.

The second parameter, the future attitudes (desires) of the projected population to form households of various characteristics, is generally approached in the following manner. First, the projected population is broken down into basic age groups and then the propensity (probability) of any individual in each particular age group to form (i.e., be the "head of") a household is predicted. These predictions take the form of "headship rates". For instance, in 1986, of 103,030 persons aged 15 to 24 in the RMOC, 14,870 (14.4%) were heads of households. This translates into a headship rate of .144 (Figure 2, p. 4 refers).

To generate the household projection, each projected age cohort is multiplied by the respective projected headship propensity of the cohort. These headship propensities

Figure 1

Ottawa-Carleton Revised Population Projection ①

Age	1986	1991	1996	2001
0-14	114,806	124,453	132,652	134,100
15-24	103,032	91,340	87,605	94,856
25-34	116,405	129,022	128,232	118,223
35-44	96,536	116,389	131,463	141,049
45-54	63,450	78,085	100,168	121,365
55-64	53,474	55,012	60,631	74,900
65-74	36,887	42,243	45,383	47,659
75+	22,064	28,068	34,922	41,676
Total	**606,654**	**664,612**	**721,056**	**773,828**

①"Reference" scenario : 7000 annual net migrants (see Population Projections : Ottawa-Carleton 1986-2011, Planning Dept. April 1990).

may be held constant (using the most recently observed rate or an adjustment) or varied over the projection preiod to reflect expected trends.

On the basis of the previous literature review undertaken in 1986, the planning staff decided that there was justification for revising headship rates to reflect a projected decrease in household formation among young adults and a small increase in headship rates for the middle aged and the elderly. Although the overall rate of household formation was not affected, these adjustments produced a shift in emphasis from younger to middle aged households.

This paper, drawing upon more recent literature, briefly reviews each age cohort to reveal factors or forces that suggest additional adjustments to headship rates. These revised headship rates are then used to project the number of future households, based on the revised population threshold of 775,000.

With respect to affordability, the third parameter affecting household formation, the 1990 population projection is predicated on moderate levels of economic expansion, the force behind the projected 7000 net in-migrant stream. It would be inconsistent to match this relatively high population projection with a pessimistic view about incomes that will be available to support household growth. Hence the projection of households contained in this report assumes, in general terms, economic conditions favorable to household formation.

The projection also assumes that there will be no energy crisis over the study period. As a result, home maintenance and transportation costs should not escalate to levels where they would constitute deterrents to household formation or cause dramatic shifts in preferences by structure type.

The increasing numbers of international immigrants in the net migrant stream is expected to dampen headship rates for young and mid-life aged cohorts. This is for both attitudinal and affordability reasons. First, most current source regions (i.e., Asia, South America, the Caribbean, the Middle East) have a high incidence of extended families. Second, as immigrants may have relatively low incomes until they are assimilated into the mainstream, they may need several wage earners to maintain a single household.

The following review focusses on cultural or social factors which may be at work in parallel with the assumption of a reasonably robust economy.

COHORT PROFILES

This review is structured around four principal age groups which are often discussed in housing research articles. First are the young adults, aged 15 to 34, who have historically exhibited a rapid increase in headship rate with age, and a switch over from non-family households (either single or mixed single person households) to family households (married couples, or married with children) by the time they reach their early 30s.

Then there are households with a head who is middle-aged (35 to 54), which have exhibited relatively high headship rates and relatively homogeneous household characteristics (typically married or common-law couples, with or without children, although there has been an increasing proportion of single person and single parent households).

Then there are the older middle-aged (55-64) who are singled out for discussion due

to continuing interest in the so-called "empty- nester" phenomenon. This group really is a sub-set of the middle aged. (Some other studies refer to the 45-54 or 45-64 group as empty nesters.)

And finally there are the seniors (aged 65+) who have attracted a large amount of attention due to the recent rate of growth in this group. Given the significant increases in this cohort, it has been divided into two sub-groups: 65-74 year olds, and those 75 and older.

Because of their relative health and resulting independence, those in the former sub-group generally exhibit different headship rates, household types and housing choices than their older counterparts.

Note: The 0-14 year group is not discussed as they do not head households.

Cutting across all four principal age groups are social trends such as marriage/ separation and divorce/ remarriage rates which influence the number of single person (and single parent) households which are formed. However, these trends are best discussed by age group since their effects are more or less pronounced depending upon the group in question.

Historical headship rates by age cohort are shown in Figure 2.

Figure 2

Headship Rates in Ottawa-Carleton 1971-1986

Age	1971	1976	1981	1986
0-14	.000	.000	.000	.000
15-24	.114	.160	.160	.144
25-34	.470	.492	.516	.490
35-44	.510	.535	.551	.553
45-54	.534	.539	.565	.572
55-64	.566	.581	.578	.579
65+	.531	.591	.595	.604
65-74			.625	.630
75+			.548	.560
Total	**.294**	**.334**	**.459**	**.464**

The basic purpose of this review is to identify what, if any, evidence exists in the literature to suggest that the 1986 update headship rates should be varied (up or down). And, in this regard, the key group to watch is the middle aged (35-54) since this group will account for approximately two thirds of the projected household growth to 2001 (and over 60 per cent of the projected population growth). A small change in the headship rate assumption for this group will alter the total household projection substantially. The seniors (65+) are another key group, accounting for one quarter of total household growth. In contrast, even fairly substantial changes in the headship rates of young adults (15-34) and empty nesters (55-64), while of interest, would not materially affect the total number of new households that will be formed.

Following the discussion on each age group, a "best guess" of the most likely change in headship rates is presented (both direction and magnitude). At the end of this section these "best guesses" for each age cohort are put together and a re-calculation of the household projection is presented. A comparison to the household projection published in 1986 completes this section.

Young Adults (15-34). Headship rates for the 15-24 age group increased markedly through the early 70s (from 11.4% in 1971 to 16.0% in 1976) and remained steady over the next five years (registering 16.0% again in 1981). However, during the first half of the 80s, the rate dropped back again (to 14.4% in 1986). As headship was rising during the 70s, there was a concomitant increase in the proportion of single person households and other non-family households in this age group. By 1976 over one half (55%) of these households were non-family, largely single person households. This age group has posted by far the highest rate of increase in single person household formation. The major reasons for the increase appear to have been early home leaving (which to a considerable extent is dependent upon the relative affluence of youth) and a trend towards later marriage. However, increased unemployment among young adults during the recession of the early 80s eroded this group's affluence, and this was reflected in the reduced headship rate in 1986.

With rising rates of post-secondary education, employment among young adults is unlikely to increase significantly (regardless of the strength of the economy). It therefore seems unlikely that headship rates for this group in Ottawa-Carleton will rebound to 1976-81 levels. Because of the cohort's desire for material comfort and the likelihood that there will be a continuation of the trend to postponed marriage, it has also been suggested that a larger proportion of young people will stay home.

For those that do leave home, it is likely that there will be fewer single person households and more mixed-single households (i.e., sharing with one or more house-mates as mixed singles, and combining incomes to support the household). Although this indicates a shift away from married couples to so-called "mingle" households (mixed singles) this second effect on the headship rate would be minimal since married couples are simply being replaced by unrelated pairs.

In light of the foregoing, a return to the 1981 headship rate (16.0%) cannot be supported as the basis of future projections for this youngest age group (15-24). The 1986 observed headship rate of 14.4% will therefore be adjusted downward; rates for 1991, 1996 and 2001 are projected to be 14.3%, 14.2% and 13.9%, respectively.

For the 25-34 age group, headship rates continued to increase unabated through the early and mid 70s, from 47.0% in 1971 to 51.6% in 1981 (coupled with a sharp increase in the proportion of non-family, largely single-person households). Although the frequency of marriage in this group was twice that of the 15-24 year group, there was a near doubling in the proportion of persons in this age group who remained unmarried. And for those that did marry there was an increase in the rate of marital break-up.

Although this group is much more likely to be fully employed than the under 25 year group (i.e., better able to economically support households) the 1986 headship rate, 49.0%, suggests that rates may have peaked for this cohort. This view is supported by the American literature, which reports a stabilization of marital break-up rates and increasing propensity to return to the parental home. Because of the expectation of increasing immigration, the 1991 headship rate for 25-34 year olds is reduced to 48.9%, and further reduced to 48.8% in 1996 and 48.7% in 2001.

Middle Aged (35-54). In this group, the 35-44 year olds experienced a large increase in headship rates throughout the 70s, from 51.1% in 1971 to 55.1% in 1981. Headship rates for the 45-54 segment of this group did not rise much in the early 70s, but did increase sharply to 56.5% by 1981. Experience from 1981-86 has shown further increase for both groups, to 55.3% and 57.2% respectively. The American literature suggests no further increases in single person and single parent households within this group, largely because of stabilization of marital break-ups.

For the purpose of the 1989 projection, because of increasing immigration the observed 1986 headship rates of 55.3% for the 35-44 age group will be reduced to 55.2% in 1991, held at 55.2% in 1996 and further reduced to 55.1% in 2001. For the 45-54 group, the 1986 headship rate of 57.2% will be reduced to 57.1% in 1991, held at 57.1% in 1996 and further reduced to 57.0% in 2001.

Empty - Nesters (55-64). This age group, which historically has had a high headship rate, experienced only a modest increase in rate from 1971-76 and then a small decline from 1976-81. In 1981, the headship rate was 57.8%; in 1986, it was 57.9%. This group is of greater interest from the point of view of the type of housing they may occupy (when the children leave home) than from any great expectation about changes in their rate of household formation. As retirement approaches, one might speculate that the desire to establish/maintain separate (single person) households would diminish, making divorce less likely. Further, with increasing life expectancy, there should be fewer widows in this age group than in the past.

On this basis it is concluded that the 1986 headship rate observed for this group, 57.9%, should be adjusted downward to 57.8% in 1991, 57.7% in 1996 and held at 57.7% to 2001.

Seniors (65 years+). This group has the highest headship rate and posted the largest numerical gains in households of any group during the early 70s. A major part of this increase was due to the increase in single-person households. Since then, the headship rate has increased only marginally (from 59.5% in 1981 to 60.4% in 1986). With mandatory pension plans and a high degree of (previous) home ownership, it could be expected that in future seniors will have increased financial ability to maintain households (separate from their families). Improvements in levels of health and com-

munity based support services should also increase functional independence for this group, particularly for those 75 and over. However, the very improvements in health care that allow aging seniors to remain independent longer should also mean higher survival rates, particularly for elderly males. For the 65-74 group, it is expected that the resulting lower incidence of widowhood will lower headship rates more than increased independent living will raise rates. For the 75+ group, however, the reverse is anticipated, with more independent households acting to increase headship rates.

An additional factor to be considered among those affecting seniors household formation is their relatively high occupancy of congregate housing. This term includes institutional residential buildings (eg. nursing homes and other special care facilities) whether or not the individual dwelling units are self-contained, as well as all residential facilities with multiple non-self-contained units. This means that not all seniors living in self- contained multi-unit apartments are in fact household heads by census definition (the 1986 Census reported that 5,730 persons 65 and over, 9.7% of this age group, lived in collective dwellings). This report does not attempt to project collective dwelling occupancy.

The headship rate for the 65-74 sub-group of seniors, which was 63.0% in 1986, is projected to fall to 62.8% in 1991, 62.6% in 1996 and 62.4% in 2001. The rate for the 75+ sub-group was 56.0% in 1986. It is expected to increase somewhat over the same period, from 56.3% in 1991 to 56.5% in 1996 and 56.6% by 2001.

The revised expectations for headship rates discussed above are summarized in Figure 3, which also includes the rates projected in the 1986 report and the actual (observed) 1986 rates.

Figure 3
Projected Headship Rates 1990

Age	1986 projection* for 2001	1986 Actual	1990 Projection 1991	1996	2001
15-24	.140	.144	.143	.142	.139
25-34	.528	.490	.489	.488	.487
35-44	.559	.553	.552	.552	.551
45-54	.579	.572	.571	.571	.570
55-64	.578	.579	.578	.577	.577
65+	.600	.604	.602	.599	.597
65-74		.630	.628	.626	.624
75+		.560	.563	.565	.566

*Official Plan Review: Research Report, Update of Household and Housing Projections, RMOC Planning Department, April 1986.

FIGURE 4

HOUSEHOLD PROJECTION : USING REVISED POPULATION PROJECTION AND REVISED PROPENSITY ASSUMPTIONS

Age Group	1986			1991			1996			2001		
	Population	Propensity Factor	Households	Population Projection	Propensity Factor	Household Projection	Population Projection	Propensity Factor	Household Projection	Population Projection	Propensity Factor	Household Projection
15-24	103032	0.144	14870	91340	0.143	13062	87605	0.142	12440	94856	0.139	13185
25-34	116405	0.490	56995	129022	0.489	63092	128232	0.488	62577	118223	0.487	57575
35-44	96536	0.553	53380	116389	0.552	64247	131463	0.552	72568	141049	0.551	77718
45-54	63450	0.572	36325	78085	0.571	44587	100168	0.571	57196	121365	0.570	69178
55-64	53474	0.579	30975	55012	0.578	31797	60631	0.577	34984	74900	0.577	43217
65-74	36887	0.630	23220	42243	0.628	26529	45383	0.626	28410	47659	0.624	29739
75+	22064	0.560	12365	28068	0.563	15802	34922	0.565	19731	41676	0.566	23589
TOTAL	491848	0.464	228140	540159	0.480	259116	588404	0.489	287906	639728	0.491	314201

THE 1990 HOUSEHOLD PROJECTION

The revised headship rates have been combined with the revised population projection to produce a new household projection, shown in Figure 4.

According to the projection, the number of households is expected to increase by 86,061 from 1986 to 2001. Approximately two-thirds of the increase is in the middle aged cohorts; i.e., those 35-54 years. While the number of households headed by young adults aged 15-34 will diminish slightly (due primarily to declining population in these age groups), households maintained by the cohort age 75+ will nearly double. More moderate increases, of 40% and 30% respectively, are expected in the 55-64 and 65-74 year old age cohorts. A summary of the projection giving a comparison with the projection published in 1986 is presented in Figure 5.

Conclusions

The revised household projection results in a significant increase over that contained in the projection published in 1986. Importantly, all of the projected increase from 1986 through 2001 (86,061) is a result of an upward revision in the population projection. The overall downward adjustments to headship rates argued in this report produce a smaller number of households (by 7,100) than would be the case if the headship rates used in the 1986 projection had been applied to the revised population projection.

Figure 5
Comparison of Household Projections to 2001

Age	1986 Update Report	Modified 1986 Update ①	This Report
15-24	12,456	13,280	13,185
25-34	57,487	62,422	57,575
35-44	73,045	78,846	77,718
45-54	64,842	70,270	69,178
55-64	41,125	43,292	43,217
65+	53,167	53,155	53,328
65-74	-	30,025	29,739
75+	-	23,130	23,589
Total	**302,122**	**321,266**	**314,201**

① 1986 Update report household propensity, but 1990 population projection.

HOUSING REQUIREMENTS

The final section of this paper takes the revised household projection through to a projection of housing requirements. This discussion looks at household type (family, non-family) and also explores housing unit "requirements" (by structure type and tenure type).

This section, like the foregoing, proceeds on the basis of discussing each age group in turn, with a prediction given for household types and future housing unit demands by type of structure and tenure.

It should be stressed that unlike the comments made above on possible changes in household formation rates, which the literature has shown to be related to changes in some key demographic or economic parameters, the comments given below with regard to possible changes in housing occupancy (i.e., type of structure and tenure) are more speculative. This is particularly true with respect to structure type, where self-reporting of dwelling type by census respondents does not always conform to census dwelling type definitions. The result is a potentially distorted census base, which may compound any speculative misdirections in projections from that base.

Previously, most insight into housing preference had to be inferred from housing occupancy data. This left the problem of deciding the degree to which housing was occupied according to preference, as against occupancy which was dictated by the accommodation available within the housing stock. However, it is assumed that over the long term the relation between supply and demand will sort out most supply problems (that are not related to a lack of income). This would suggest that, apart from income limitations, occupancy patterns can be relied upon to express housing preferences, in a general way, over a long time horizon.

There is a growing literature about housing preferences and how these relate to changing social and economic conditions. Information on occupancy patterns is now supplemented by a growing number of broad based non-census surveys which routinely query unit type and tenure preferences/intentions.

These surveys generally support the notion of a reasonably predictable housing cycle, starting with the formation of a first household as a young adult, either as a single person or a mixed single (usually in an apartment), followed by family formation (and a move most often to ground-oriented accommodation), and then, in some cases, a move back to a multiple unit structure at a later stage. The assumption is that household type can be linked to housing requirements.

However, cumulative effects of the more complex housing progression observed in the 70s and 80s (occasioned by marital break-up, second families, never-married couples, etc.) have given rise to housing preferences and needs which are very individualized, making cohort behaviour increasingly difficult to predict.

Nevertheless, at the end of this section predictions by cohort are consolidated to present a projection of housing requirements (by housing type).

Young Adults (15-34). During the early 70s, the headship rate for the 15-24 age group increased 41%, but the non-family segment (i.e., single person and mixed singles) grew by 93% (single person households grew by 121%!). From 1976 to 1981 these trends plateaued, and, with the recession of the early 80s, reversed for 1986. In a previous section it was argued that head-

ship rates will fall further by 2001.

The decrease in headship rate will be partly a result of reduced interest in early home leaving and a reduced ability to form a single person household. It is also expected that delayed marriage will persist, and that young immigrants will tend to live in extended family households headed by others. Therefore, it is predicted that there will be a moderate rise in the proportion of non-family households, which will increasingly be comprised of combined (i.e. mixed single) households.

In terms of housing unit type, this age group typically occupies multi-unit structures and it is assumed this will generally prevail into the future.

One should note, however, that from 1976 to 1981, a period during which there was a distinct shift to non-family households for this group, there was a 7% shift away from apartments to low rise multiples and single detached housing. Some part of this shift may have been "program driven" in the sense that a large number of AHOP units became available during this period while apartment construction declined; however, a further 2% shift away from apartments occurred during the 81-86 period. There was also a concomitant small decline in the proportion who rented as opposed to those who owned. However, the expected increase in the percentage of non-family households, coupled with the cohort's generally limited purchasing power and high mobility, suggests an increasing preference for rental tenure in future.

For the purpose of the housing unit projection it is assumed that, based on the relatively unfavorable economic situation of young people, and an increasing emphasis on post secondary education, the housing requirement will continue to strongly emphasize multi-unit structures with apartment occupancy declining marginally to 69% in 2001, low rise multiple units increasing to 22% and the single detached requirement remaining constant at 9%.

For the 25-34 year old group, the trends in household type through the 70s were the same, but less pronounced, than for those of younger ages. Overall headship rates climbed approximately ten per cent, but this was accompanied by a marked shift away from family households to non-family households (due to divorce and postponed marriage). This age group was also much more prone to forming single person households. However, it has been argued in the previous section that with increased return to the parental nest and stabilizing rates of marital break-up, headship rates for the group may have peaked. With increasing numbers of immigrants, there may also be greater incidence of family households, particularly at the end of the projection period.

Compared to the younger group, the 25-34 group occupied apartments at a relatively stable rate, although a similar decline in the late 70s was reversed in the early 80s (42% in 1976, 40% in 1981 and 41% in 1986). There was a similar pattern in the occupancy of single detached from (28% in 1976, 26% in 1981, and 27% in 1986). These two trends combined to produce an increase in the occupancy of non-apartment forms of multiples 1976-81 and a decrease 1981-86. This appears to refute the discussion in American literature which highlights the increasing likelihood of young couples occupying row housing (as a second choice to single-detached, due to affordability problems). With respect to tenure, it is expected that this group will in future exhibit increasing propensity for rental accommodation because of diminishing oppor-

tunities for equity gains in "starter" housing. This is discussed further on page 19.

For purposes of the housing unit projection, it is assumed that the trend toward increased occupancy of non-apartment multiples for this age group will reappear, and that apartment occupancy will decrease marginally. Occupancy of single detached dwellings is expected to increase marginally at the same time. This yields a projected 2001 occupancy ratio for this cohort as follows: single detached 28%, multiples 33% and apartments 39%.

Middle Aged (35-54). This group has behaved much like the former group (25-34), exhibiting sharp increases in household formation during the 70s, although with a much higher tendency towards family households. Notwithstanding a rather stable rate of family household formation, an increasing proportion of these were single-parent households. At the same time, there was significant growth in one person households (both being results of an increase in the rate of divorce).

With stabilizing marital break-up rates, the proportions of family vs. non-family and single-person households should remain relatively constant for this group, increasing only to reflect the greater propensity of immigrants to form family households.

With regard to structure type, the middle-age group has always exhibited a high rate of single-detached occupancy (approximately 50% of the 35-44 group and 55% of the 45-54 group). And, although apartment occupancy has been low (approximately 20%), it rose slightly for the 35-44 group from 1981-86. This young middle aged group experienced a concomitant decline in occupancy of non-apartment multiples during this time. This may have been a result of smaller family size, or economic circumstances resulting from marital break-up during the recession years. For the 45-54 year old group, which may have been more "established" and have had fewer affordability concerns, the multi-unit occupancy pattern was the reverse; i.e., a slight decrease in apartment occupancy and a slight increase in occupancy of other multiples.

As a rough generalization, middle aged households are one half as likely to occupy an apartment but twice as likely to own it as their younger counterparts; slightly less likely to occupy non-apartment multiples (though more inclined to ownership); and are ten times as likely to own and occupy single-detached units. Increasing numbers of immigrants may, however, increase the incidence of rental tenure because of affordability problems until they are established.

For the purpose of the housing unit projection it is assumed that these observed occupancy tendencies will continue, with a continued shift into apartments among the younger middle aged, and into non-apartment multiples among the older group, so that housing is occupied in the following ratios: for the 35-44 group, single-detached 51%, multiples 27%, apartments 22%; and for the 45-54 group, single- detached 56%, multiples 26%, apartments 18%. The corresponding ratios in 1986 were 50:29:21 for the 35-44 group, and 56:24:20 for the 45-54 group.

Empty - Nesters (55-64). Taken as a whole, the 55-64 group exhibited a very stable pattern of headship rates through the 70s, with only a very slight shift in the proportion between family and non-family households. In 1981, families made up 73% of all households in this age group; in 1986, the percentage of families was 74%. This may increase slightly in future with improved

male survival rates.

Like the middle aged group, over half the households in this cohort occupied single-detached homes at relatively stable rates from 1976 to 1986 (52% in 1976, 54% in 1981 and 53% in 1986). Unlike the middle aged group, empty nesters are exhibiting a decreasing tendency toward occupancy of apartments (33% in 1976, 30% in 1981 and 29% in 1986). At the same time, their occupancy of non-apartment multiples has risen (from 15% in 1976 to 16% in 1981 and 18% in 1986). On balance, this group has a stronger bi-modal occupancy pattern than other middle-age groups (i.e., proportionately more single-detached and more apartments with correspondingly less in the middle density category). With respect to tenure, it is in the middle of this cohort: i.e., at age 60, that propensity to ownership begins to decrease.

The trade literature continues to speculate about this age group. The basic assumption is that the children of these families (of which there were an unprecedented number) have left home. There is therefore a mismatch between household size (the remaining two parents) and the dwelling unit (most likely a large single-detached), and a desire for the "empty nester" couple to move to smaller accommodation. Further, there seems to be an assumption that these empty nesters will flock from the suburbs to high amenity condominiums (both high and low rise) near the city centre.

Although this theory can be challenged on several counts, most notably the delayed leaving and possible return of adult children to the nest, and the low propensity of this cohort to move at all, the 1986 occupancy data do confirm that there is a growing preference for non-apartment multiples among "empty nesters" in Ottawa-Carleton. Looking into the future, several things seem apparent. First, there will be substantially fewer children born to families. Second, it will be more likely that there will be two income earners in these families (as female labor force participation rates continue to climb). Third, and based on the foregoing, of all age groups, the 55-64 year old households may have the largest number of options available to them (i.e., the financial resources to stay in a single detached, or move to a high amenity apartment or townhouse). As the tendency to move at this age is quite low, it may be the case that little change in housing is precipitated until retirement arrives, at which time housing options are most likely to be reviewed. This argues for relatively stable patterns of occupancy for the pre-retirement part of this group, but highlights that substantial movement may be in store for the post retirement age group. However, increased affluence may precipitate earlier retirement, increasing the mobility of the cohort as a whole. This may result in greater preference for low maintenance, multi-unit accommodation.

Based on the foregoing observations, for the purpose of a future projection the following ratio will be assumed: single-detached 50%, multiples 20% and apartments 30% in 2001. The corresponding ratio in 1986 was 53:18:29.

Seniors (65+). As argued earlier, it is expected that the headship rate for this group will continue to decrease because of increased male longevity and increasing occupancy of congregate dwelling units (the latter by definition cannot contain an independent household).

With respect to household type, there has been considerable fluctuation in family-non-family percentages. In 1971, 46% of households 65+ were non-family. This per-

centage increased to 53% in 1981, and fell back to 49% in 1986. The growth over the 1971-81 period was due to a rapid rise in single person households able to afford independent living; presumably increased longevity among males subsequently reduced the incidence of widowhood among the larger, younger senior cohorts.

This group exhibited some surprising housing occupancy patterns over the period 1976-86. Contrary to popular belief about increasing apartment occupancy for seniors, a decrease was observed (from 51% in 1976 and 1981 to 49% in 1986). At the same time, there was an increase in single detached occupancy (from 38% in 1976 and 1981 to 40% in 1986). Occupancy of non-apartment multiples remained steady at 11% over the 1976-86 decade.

The patterns may be easier to understand when the seniors group is broken down into the 65-74 and 75+ cohorts referenced in the preceding discussion of headship propensity. For the younger cohort, single-detached occupancy increased from 41% to 44% (1981 to 1986), while apartment occupancy decreased from 48% to 44% (occupancy of multiples increased from 11% to 12%).

For those households over 75, propensity for single-detached occupancy remained stable at 33%, while apartment occupancy increased marginally, from 58% in 1981 to 59% in 1986 (occupancy of multiples decreased marginally, from 9% to 8%). This would suggest that increased affluence is allowing more young elderly, regardless of any change in family status, to continue to maintain a single family home. Although the health effects of advancing age among the 75+ group may have been a deterrent to single-family occupancy, these effects may have been countered by greater availability of services necessary to continue to maintain a detached home.

The propensity to ownership is now decreasing with age after age 60. It is expected that as they age, seniors will increasingly become a cohort of renters. However, if households liquidate their real estate assets they may increasingly choose emerging non-traditional tenure options (e.g., life tenancy).

With respect to occupancy, looking into the future, it is apparent that there will be increasing numbers of seniors households with considerable equity, pensions from two income earners, and fewer dependents. It seems that the "new" seniors in the 90s will have better health, more wealth, and more income. And, being retired, there is no need to locate close to work. In short, seniors will have increasing freedom to choose their housing arrangements.

In the past, as the post retirement cohort grew older, there was a strong cross-over from single-detached to apartments, with relatively little interest shown in non-apartment multiples. The literature suggests future choices of seniors will be increasingly varied. Interest in items such as security, low maintenance, and single-level living, combined with increased levels of wealth and income, however, do argue for the occupancy of apartment units with many amenities (and probably of large size).

Based on the foregoing, it is assumed that in the future there will be an increase in the proportion of seniors occupying either rental or condominium apartments. However, because more of these apartments will be recognized as collective dwellings, the incidence of apartment occupancy by independent households will decline marginally for the 65-74 age group, and more strongly

for the 75+ group, who would presumably be more attracted to supported collective living. There will be a decrease in multi-level multiples, and an increase in single-detached because of the reduction in non-collective apartment occupancy.

The following ratios are predicted for the 65-74 cohort in 2001: single-detached 48%, multiples 9%, and apartments 43%. The corresponding ratio in 1986 was 44:12:44. For the 75+ group the 2001 ratios are 38:7:55. The corresponding ratios in 1986 were 33:8:59.

As a summary, the shifts in occupancy by unit type for each group are given in Figure 6.

The projection given in Figure 6 distributes the projected households into structure types. However, the resulting projection of "housing requirements" is not a projection of required stock since it does not make allowances for vacancy.

Overall, housing requirements are projected to grow by nearly 40% over the fifteen year projection period (1986-2001). Over half of this growth will be in single-detached units (45,861). The remainder is split as follows: non-apartment multiples at 19,486 and apartments at 20,774.

Over the projection period, the proportion of single-detached will rise (from 41.5% to 44.7%) with a concomitant decrease in apartments (from 34.7% to 31.8%). The proportion of non- apartment multiples is projected to decline slightly, from 23.8% to 23.5%.

Most of the increase in single-detached units will be the result of an increase in the number of households headed by middle aged adults (ages 35-54) seeking single-detached homes for raising families.

For apartments, increased demand will have two sources. First are the young middle-aged (35-44) who become single through marital break-up. Second are the seniors, especially those in the oldest age cohort (75+).

The main demand for non-apartment multiples is from young to middle-aged adults (25-54). This demand is a combination of young adults looking for "starter homes" and older adults looking for luxury townhouse accommodation.

Other Trends. Cutting across several age categories are two underlying trends which have already been accounted for in the discussions of each age group, but are pulled out here for focussed comment and projection.

FAMILY/NON-FAMILY HOUSEHOLDS

The proportion of non-family households, which rose from 21% in 1971 to 28% in 1976 and 31% in 1981 appears to have peaked; it held steady at 31% in 1986. The increase during the 70s was directly linked to the emergence of the single person household as a significant component of household growth. Interestingly this did not trigger a proportionate increase in the rate at which apartments were occupied during the late 70s. But, it is not clear the degree to which this was controlled by availability of apartment units. During the first half of the 1980s the percentage of apartment occupancy did decrease. In this instance, availability does seem to have been a key factor, as vacancies averaged less that 1% during the period.

The preceding discussions have suggested that the formation of young single person

FIGURE 6

PROJECTION OF HOUSING REQUIREMENTS BY STRUCTURE TYPE (Revised Population Projection)

AGE GROUP	HOUSEHOLDS	OCC.	#SINGLE	OCC.	# MULTI	OCC.	# APTS.	
1986								
15-24	14870	0.088	1315	0.215	3200	0.696	10350	14865
25-34	56995	0.272	15510	0.314	17880	0.414	23615	57005
35-44	53380	0.504	26925	0.286	15265	0.210	11210	53400
45-54	36325	0.559	20295	0.237	8595	0.204	7425	36315
55-64	30975	0.526	16290	0.183	5675	0.291	9015	30980
65-74	23220	0.444	10315	0.116	2695	0.440	10220	23230
75+	12365	0.328	4060	0.083	1030	0.588	7270	12360
TOTAL	228140	0.415	94710	0.238	54340	0.347	79105	228155
1991								
15-24	13062	0.09	1176	0.21	2743	0.70	9143	13062
25-34	63092	0.27	17035	0.32	20189	0.41	25868	63092
35-44	64247	0.51	32573	0.28	17989	0.21	13685	64247
45-54	44587	0.56	24969	0.25	11147	0.19	8472	44587
55-64	31797	0.53	16852	0.18	5723	0.29	9221	31797
65-74	26529	0.45	11938	0.11	2918	0.44	11673	26529
75+	15802	0.35	5531	0.08	1264	0.57	9007	15802
TOTAL	259116	0.425	110074	0.239	61974	0.336	87068	259116
1996								
15-24	12440	0.09	1120	0.22	2737	0.69	8584	12440
25-34	62577	0.28	17522	0.32	20025	0.40	25031	62577
35-44	72568	0.51	36937	0.28	19956	0.22	15675	72568
45-54	57196	0.56	32030	0.25	14299	0.19	10867	57196
55-64	34984	0.51	17842	0.19	6647	0.30	10495	34984
65-74	28410	0.47	13353	0.10	2841	0.43	12216	28410
75+	19731	0.37	7300	0.07	1381	0.56	11049	19731
TOTAL	287906	0.438	126103	0.236	67886	0.326	93917	287906
2001								
15-24	13185	0.09	1187	0.22	2901	0.69	9098	13185
25-34	57575	0.28	16121	0.33	19000	0.39	22454	57575
35-44	77718	0.51	39636	0.27	20984	0.22	17098	77718
45-54	69178	0.56	38740	0.26	17986	0.18	12452	69178
55-64	43217	0.50	21609	0.20	8643	0.30	12965	43217
65-74	29739	0.48	14275	0.09	2677	0.43	12788	29739
75+	23589	0.38	8964	0.07	1651	0.55	12974	23589
TOTAL	314201	0.447	140531	0.235	73842	0.318	99829	314201

households will not increase, despite a relatively healthy economy. This is due to increasing incidence of post secondary education, delayed home leaving and deferred entry into the full time labor market.

For the middle aged groups, the growth in single person households was largely a function of increasing marital break-up, which is now believed to have stabilized. The basic change in housing occupancy predicted here is a very slight shift away from non-apartment multiples to apartments for those aged 35-44, and a comparable shift from apartments to non-apartment multiples for the older 45-54 group, largely due to increased affordability and perhaps less interest in the "singles" lifestyle for the latter group.

For senior single person households, it is projected that there will be an increase in the proportion occupying apartments- largely due to the increasing number of singles in the upper portion of this age group and a desire for secure, single-level accommodation.

A corollary trend is the stabilizing proportion of family households. And, of the family households that do form there will be a further decline in family size as a result of declines in the number of births by the early 1990s. On the surface, the projected decline in family size would seem to argue for smaller dwelling units.

It has been argued in some of the American literature that the declining family size will lead to "downsizing". Downsizing can take the form of choosing multiple units, as opposed to detached housing units or choosing smaller detached housing. It is hypothesized that amenity laden multiple units will increasingly be the preferred choice of downsizing empty nesters, while small younger families will prefer single-detached units.

However, the impact of declining family size should not be overstated. It should be pointed out that the future decline in family size will nowhere match the decline through the 70s- at which time the shift away from single detached was quite modest. Further, there will be an increased likelihood that future (somewhat smaller) families will be supported by two income earners with presumably more income to spend on housing. And, it is significant to note that the previous experience in Canada has been to combine declining family size with increasing dwelling size.

As a final observation, it should be noted that the majority of demand in the 90s will not be coming from the 25-34 year group - the traditional first time buyers - but from the 35-54 year group where "trading- up" has been more prevalent. Therefore, "downsizing" will, per force, be targeted at a small (and declining) market segment. It would seem that the first time home buyer might more likely be moving into homes vacated by older groups that are trading-up. This paper concludes that much of the new housing built in the 90s will be large detached singles for the trade-up market.

Projections of household type by age cohort are shown in Figure 7.

As discussed above, Figure 7 illustrates increasing propensity to form non-family households among 15-24 year olds. For older cohorts up to age 54, the percentage of family households is expected to increase somewhat as a result of immigration, particularly toward the end of the projection period. For empty nesters and seniors, increasing longevity for males suggests a larger percentage of family households, particularly for the 75+ groups.

FIGURE 7

PROJECTION OF HOUSEHOLDS BY TYPE (Revised Population Projection)

AGE GROUP	HOUSEHOLD	PROP.	FAMILY	PROP.	NON-FAMILY
1986					
15-24	14870	0.428	6364	0.572	8506
25-34	56995	0.659	37560	0.341	19435
35-44	53380	0.807	43078	0.193	10302
45-54	36325	0.828	30077	0.172	6248
55-64	30975	0.734	22736	0.266	8239
65-74	23220	0.556	12910	0.444	10310
75+	12365	0.351	4340	0.649	8025
TOTAL	228140	0.688	157065	0.311	71065
1991					
15-24	13062	0.425	5551	0.575	7511
25-34	63092	0.660	41641	0.340	21451
35-44	64247	0.810	52040	0.190	12207
45-54	44587	0.830	37007	0.170	7580
55-64	31797	0.740	23530	0.260	8267
65-74	26529	0.565	14989	0.435	11540
75+	15802	0.360	5689	0.640	10113
TOTAL	259116	0.696	180447	0.304	78669
1996					
15-24	12440	0.423	5262	0.577	7178
25-34	62577	0.665	41614	0.335	20963
35-44	72568	0.815	59143	0.185	13425
45-54	57196	0.835	47759	0.165	9437
55-64	34984	0.750	26238	0.250	8746
65-74	28410	0.575	16336	0.425	12074
75+	19731	0.370	7300	0.630	12431
TOTAL	287906	0.707	203652	0.293	84254
2001					
15-24	13185	0.420	5538	0.580	7647
25-34	57575	0.675	38863	0.325	18712
35-44	77718	0.825	64117	0.175	13601
45-54	69178	0.845	58455	0.155	10723
55-64	43217	0.760	32845	0.240	10372
65-74	29739	0.585	17397	0.415	12342
75+	23589	0.385	9082	0.615	14507
TOTAL	314201	0.720	226298	0.280	87903

The expected net effect is to change the split between family and non-family households, which was 69:31 in 1986, to 72:28 in 2001.

TENURE

A second trend that can be examined is the increasing rate of rental as compared to ownership. Historically, rental as a form of tenure has declined in popularity with age (until age 65).

However, in recent years, rapidly escalating house prices in major markets such as Ottawa-Carleton have reduced the ability of first time purchasers with limited equity (typically those in the younger age cohorts) to buy their own homes. As housing demand (in terms of need for additional units) shifts to the middle aged group, the starter market is predicted to decline. This could have two quite different consequences - either increased incidence of purchase of now more affordable existing starter units, or a market glut of dwellings lacking appeal to young potential buyers, who recognize that they will not be able to increase their equity through purchase of such units (i.e., units which will not appreciate in value over time). It is expected that the tendency will be toward the latter over the longer term, resulting in a gradual increase in rental tenure for the 15-34 year old group.

At the same time, there is evidence that the age at which preference for ownership begins to decrease is dropping. The most recently available data for Ottawa-Carleton (1986) suggest the turning point is now age 60, rather than age 65. As attractive alternatives to single-detached ownership proliferate for the post retirement cohorts, it can be expected that increasing percentages of them will choose to liquidate their housing assets and move into rental accommodation, and that rental will be especially attractive to the group over 75, which is expected to more than double over the projection period.

In addition, ownership is expected to decrease marginally among the middle aged cohorts, as numbers of immigrants increase toward the end of the projection period.

However, the considerable swelling of ranks of cohorts for whom ownership is still preferred means that the overall incidence of ownership is likely to increase, despite predicted decreases in propensity for all cohorts. For this reason, the overall propensity to rent, which was 48% in 1986 is expected to fall marginally to 47% by 2001, thereby increasing ownership to 53%.

Projections of tenure type by age cohort are shown in Figure 8.

Over the 15 year projection period, the number of rental units required for the population is projected to increase by 37,528 units, while ownership housing will increase by 48,565 units. The increase in requirement for rental housing is mostly a result of a projected increase in middle aged households (35-54) and to a lesser extent the increased number of older seniors (75+). The increase in the ownership requirement is focussed on middle aged adults (35- 54).

FIGURE 8

PROJECTION OF HOUSING REQUIREMENTS BY TENURE

AGE GROUP	HOUSEHOLDS	PROP.	OWNED	PROP.	RENTED
1986					
15-24	14870	0.072	1071	0.928	13799
25-34	56995	0.478	27244	0.522	29751
35-44	53380	0.478	25516	0.522	27864
45-54	36325	0.691	25101	0.309	11224
55-64	30975	0.691	21404	0.309	9571
65-74	23220	0.523	12144	0.477	11076
75+	12365	0.523	6467	0.477	5898
TOTAL	228140	0.521	118945	0.479	109185
1991					
15-24	13062	0.070	914	0.930	12148
25-34	63092	0.478	30158	0.522	32934
35-44	64247	0.475	30517	0.525	33730
45-54	44587	0.690	30765	0.310	13822
55-64	31797	0.700	22258	0.300	9539
65-74	26529	0.520	13795	0.480	12734
75+	15802	0.520	8217	0.480	7585
TOTAL	259116	0.527	136625	0.473	122491
1996					
15-24	12440	0.060	746	0.940	11694
25-34	62577	0.475	29724	0.525	32853
35-44	72568	0.475	34470	0.525	38098
45-54	57196	0.690	39465	0.310	17731
55-64	34984	0.690	24139	0.310	10845
65-74	28410	0.510	14489	0.490	13921
75+	19731	0.510	10063	0.490	9668
TOTAL	287906	0.532	153096	0.468	134810
2001					
15-24	13185	0.045	593	0.955	12592
25-34	57575	0.468	26945	0.532	30630
35-44	77718	0.470	36527	0.530	41191
45-54	69178	0.685	47387	0.315	21791
55-64	43217	0.680	29388	0.320	13829
65-74	29739	0.500	14870	0.500	14870
75+	23589	0.500	11795	0.500	11795
TOTAL	314201	0.533	167504	0.467	146697

APPENDIX

TABLE A–1: AGE OF HOUSEHOLD HEAD BY STRUCTURE TYPE: OTTAWA–CARLETON, 1986

(1986 Census Custom Tabulation)

TOTAL PRIVATE HOUSEHOLDS:

AGE OF HEAD	SINGLE	SEMI	ROW	OTHER SINGLE ATTACHED	DUPLEX	APT <5 STOREYS	APT 5+ STOREYS	MOVEABLE DWELLING	TOTAL UNITS	1986 TOTAL POP'N.	HOUSEHOLD PROPENSITY
15–19	80	35	100	10	70	310	340	0	950	43525	0.022
20–24	1200	420	1850	100	615	4060	5640	35	13920	59505	0.234
25–29	5260	1560	5515	160	1075	5930	8220	95	27810	60975	0.456
30–34	10075	2365	6155	150	900	3995	5470	80	29185	55430	0.527
35–39	14160	2565	5545	115	645	2610	4040	55	29730	54080	0.550
40–44	12670	1930	3920	95	450	1600	2960	40	23650	42455	0.557
45–49	10645	1540	2760	65	355	1210	2390	55	19025	33585	0.566
50–54	9535	1255	2180	70	370	1155	2670	60	17300	29865	0.579
55–59	8475	1065	1690	50	375	1135	3040	55	15880	27555	0.576
60–64	7690	815	1280	60	340	1145	3695	70	15095	25920	0.582
65–69	6065	545	760	35	255	1020	4120	55	12850	20720	0.620
70–74	4165	405	410	30	255	855	4225	30	10370	16165	0.642
75+	4035	350	305	30	345	1215	6055	25	12365	22065	0.560
TOTAL	94060	14840	32465	970	6045	26255	52855	650	228140	491845	0.464

TABLE A-2: AGE OF HOUSEHOLD HEAD BY STRUCTURE TYPE: OTTAWA-CARLETON, 1986

(1986 Census Custom Tabulation)

NON-FAMILY HOUSEHOLDS:

AGE OF HEAD	SINGLE	SEMI	ROW	OTHER SINGLE ATTACHED	DUPLEX	APT <5 STOREYS	APT 5+ STOREYS	MOVEABLE DWELLING	TOTAL UNITS	TOTAL POP'N.	HOUSEHOLD PROPENSITY
15-19	30	10	20	5	30	130	155	0	385	43525	0.009
20-24	300	100	300	35	195	1785	2685	10	5410	59505	0.091
25-29	840	255	780	55	350	2715	4550	25	9570	60975	0.157
30-34	1050	290	720	35	335	2025	3355	10	7830	55430	0.141
35-39	1095	240	650	25	215	1255	2505	20	6000	54080	0.111
40-44	730	155	420	15	130	705	1695	10	3855	42455	0.091
45-49	595	125	285	10	100	525	1345	20	3015	33585	0.090
50-54	620	125	255	10	90	525	1535	20	3175	29865	0.106
55-59	845	120	270	15	110	570	1725	20	3675	27555	0.133
60-64	1160	135	260	20	135	595	2205	20	4530	25920	0.175
65-69	1280	120	220	15	100	555	2645	20	4950	20720	0.239
70-74	1260	135	140	5	120	525	2865	15	5060	16165	0.313
75+	1660	140	135	20	185	805	4565	10	7510	22065	0.340
TOTAL	11465	1950	4455	265	2095	12715	31830	200	64965	491845	0.132

TABLE A-3: AGE OF HOUSEHOLD HEAD BY STRUCTURE TYPE: OTTAWA-CARLETON, 1986

(1986 Census Custom Tabulation)

FAMILY HOUSEHOLDS:

AGE OF HEAD	SINGLE	SEMI	ROW	OTHER SINGLE ATTACHED	DUPLEX	APT <5 STOREYS	APT 5+ STOREYS	MOVEABLE DWELLING	TOTAL UNITS	TOTAL POP'N.	HOUSEHOLD PROPENSITY
15-19	50	25	80	5	40	180	185	0	565	43525	0.013
20-24	900	320	1550	65	420	2275	2955	25	8510	59505	0.143
25-29	4420	1305	4735	105	725	3215	3670	70	18240	60975	0.299
30-34	9025	2075	5435	115	565	1970	2115	70	21355	55430	0.385
35-39	13065	2325	4895	90	430	1355	1535	35	23730	54080	0.439
40-44	11940	1775	3500	80	320	895	1265	30	19795	42455	0.466
45-49	10050	1415	2475	55	255	685	1045	35	16010	33585	0.477
50-54	8915	1130	1925	60	280	630	1135	40	14125	29865	0.473
55-59	7630	945	1420	35	265	565	1315	35	12205	27555	0.443
60-64	6530	680	1020	40	205	550	1490	50	10565	25920	0.408
65-69	4785	425	540	20	155	465	1475	35	7900	20720	0.381
70-74	2905	270	270	25	135	330	1360	15	5310	16165	0.328
75+	2375	210	170	10	160	410	1490	15	4855	22065	0.220
TOTAL	82590	12900	28015	705	3955	13525	21035	455	163165	491845	0.332

TABLE A-4: HOUSEHOLD PROPENSITY BY STRUCTURE TYPE OTTAWA-CARLETON, 1986

AGE OF HEAD	SINGLES	MULTIPLES	APARTMENTS	TOTAL
15–19	0.084	0.226	0.684	0.022
20–24	0.089	0.214	0.697	0.234
25–29	0.193	0.299	0.509	0.456
30–34	0.348	0.328	0.324	0.527
35–39	0.478	0.298	0.224	0.550
40–44	0.537	0.270	0.193	0.557
45–49	0.562	0.248	0.189	0.566
50–54	0.555	0.224	0.221	0.579
55–59	0.537	0.200	0.263	0.576
60–64	0.514	0.165	0.321	0.582
65–69	0.476	0.124	0.400	0.620
70–74	0.405	0.106	0.490	0.642
75+	0.328	0.083	0.588	0.560
TOTAL	0.415	0.238	0.347	0.464

(1986 Census Custom Tabulation)

TABLE A-5: 2011 HOUSEHOLD AND HOUSING PROJECTIONS, OTTAWA-CARLETON

ASSUMPTIONS:

1. 2011 Reference Scenario population projection (7000 net migrants)
2. 2001 household and structure type propensities

AGE GROUP	POP'N.	SINGLES	MULTIPLES	APART'S	TOTAL
15–24	108564	1358	3320	10412	15090
25–34	118400	16145	19028	22488	57661
35–44	132819	37323	19759	16100	73183
45–54	146188	46663	21665	14999	83327
55–64	117297	33840	13536	20304	67680
65–74	66637	19959	3742	17880	41581
75+	52390	11268	2076	16309	29653
Total 15+	742295	166557	83127	118492	368176

SUMMARY STATISTICS:

Average Household Size = 2.37

Total Units	Singles	Multiples	Apart's	Total
1986	94710	54340	79105	228140
2001	140531	73842	99829	314201
2011	166557	83127	118492	368176
Additional Units/Period				
1986–2001	45821	19502	20724	86061
2001–2011	26026	9285	18663	53975
1986–2011	71847	28787	39387	140036
Average Additional Units/Year				
1986–2001	3055	1300	1382	5737
2001–2011	2603	928	1866	5398
1986–2011	2874	1151	1575	5601

TABLE A–6: AGE OF HOUSEHOLD HEAD BY STRUCTURE TYPE: OTTAWA–CARLETON, 1981
(1981 Census Custom Tabulation)

AGE OF HEAD	SINGLE	SEMI	ROW	OTHER SINGLE ATTACHED	DUPLEX	APT <5 STOREYS	APT 5+ STOREYS	TOTAL UNITS	1981 TOTAL POP'N.	HOUSEHOLD PROPENSITY
15–19	95	50	50	55	535	720	0	1510	50685	0.030
20–24	1360	495	1780	800	4410	6465	65	15380	54500	0.282
25–29	4395	1920	5325	1340	5350	7330	215	25880	51975	0.498
30–34	8885	2605	5500	1195	3230	4980	115	26510	50070	0.529
35–39	10435	2180	4395	675	1495	2915	60	22160	39980	0.554
40–44	9270	1620	3030	470	990	2305	100	17795	32645	0.545
45–49	9705	1505	2135	615	945	2335	85	17330	29670	0.584
50–54	8665	1320	1545	495	965	2710	70	15775	28850	0.547
55–59	8715	1020	1425	395	1125	3065	80	15820	27795	0.569
60–64	6885	720	715	405	1000	3535	90	13345	22465	0.594
65–69	4785	510	395	340	890	4075	40	11035	17985	0.614
70–74	3065	305	190	345	690	3440	55	8095	12605	0.642
75+	3220	295	145	445	950	4800	20	9875	18035	0.548
TOTAL	79480	14550	26630	7580	22575	48675	1005	200500	437260	0.459